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# Catalogue of Indian Insects

FIELD MUSEUM OF NATURAL HISTORY

JUN 1 4 1967

PART 5-Nitidulidae

BY

## S. N. CHATTERJEE,

F.E.S.,

Lower Grade Assistant, Entomological Branch, Forest Research Institute, Dehra Dun.



Issued under the authority of the Government of India.

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#### PREFACE.

THE Nitidulidae are generally of scavenging habits, but some live in flowers, in stored products, and in bees' nests, while others are predaceous on Scolytids and Coccids. There are in all 228 species up to the present recorded from India.

The family has been split up into six sub-families on the characters

given below:-

The table is adapted from Grouvelle's paper in Annales de la Société Entomologique de France, Vol. LXXVII, 1908, 325 and 326; and from Reitter's Fauna Germanica, Vol. III, 11.

	(Maxilla with two lobes; prosternal pro-	1. 1. 19
1		Cateritinæ.
	Maxilla with one lobe; prosternal process almost always present	2
	c aimost aiways present	4
2	At least 2 segments of abdomen exposed At most pygidium exposed	Carpophilinæ.
4	( At most pygidium exposed	3
3	Tarsi 4-jointed	Cybocephalinæ.
J	Tarsi 5-jointed	4
4	( Labrum clearly distinct from epistome .	5
	{ Labrum clearly distinct from epistome . Labrum soldered with epistome	Cryptarchinæ,
	(Middle and posterior tibiæ with single	* 4.4.4.
	outer margin, dorsally without carina;	
	all tibiæ wide, their outer angles	
	rounded off, or obliquely truncate;	
5	the fore tibiæ notched or toothed	Meligethinæ.
	Middle and posterior tibiæ with double	
	outer margin, the upper one directed	
	dorsally; all tibiæ truncate at end or	
	with outer angle drawn into a tooth .	Nitidulinæ.
-		

To avoid repetition the following abbreviations are used in quoting references to literature:—

A. J. . . Annulosa Javanica, London, 1825.

A. M. G. . . Annali del Museo Civico di Storia Naturale di Genova, Genoa.

A. M. N. H. . Annales and Magazine of Natural History, London.

A. N. . Archiv für Naturgeschichte, Berlin.

A. S. E. B.	. Annals de la Société Entomologique de Belgique, Bruxelles.
A. S. E. F.	. Annales de la Société Entomologique de France,  Paris.
A. S. L. L	. Annales de la Société Linnéene de Lyon, Lyon.
B. C. A	. Biologia Centrali-Americana, Coleoptera, Vol. II,
	Part I, D. Sharp, London, 1890.
B. E. R	. Bulletin of Entomological Research, London.
B. M	. Bulletin de la Société Impériale des Naturalistes de
	Moscou, Moscow.
B. S. E. F.	. Bulletin de la Société Entomologique de France,  Paris.
C. C	. Catalogus Coleopterorum, Gemminger and Harold,
The second second	Tom. III, Munich, 1868.
C. N. A	. Classification of the Coleoptera of North America,
	John L. Leconte, Washington, 1861.
C. R. I	. Coléoptères de la Région Indienne, A. Grouvelle
	in Annales de la Société Entomologique
and the second	de France, Vol. LXXVII, 1908, 315-495,
	Paris.
D. A. A	. Delectus Animalium Articulatorum, Munich, 1830-
DEG	34.
D. E. Z	Deutsche Entomologische Zeitschrift, Berlin.
E	. Études entomologiques ou descriptions des insects
	Nouveaux et observations sur leur Synonymie (Carnassiers), Laporte, Paris, 1834-35.
Е. В.	. Entomo (gasche Blätter, Berlin.
E. B. E	. The Elements of British Entomology, Shuckard,
	London, 1839.
E. E	. Etudes Entomologiques, Victor Motschulsky, Hel-
	singfors, Vol. I-X, 1853-62.
E. M. M	. Entomologists' Monthly Mazgazine, London.
E. S	. Entomologia Systematica, J. H. Fabricius, Hafniæ,
,000	1792.
F. G. K.	Fauna Germanica, Käfer III, E. Reitter, Stuttgart,
77	1911.
F. H	. Fauna Goleopterorum Helvetica, O. Heer, Turici,
G. C	1841.
G. C.	Genera des Coléoptères, Lacordaire, Vol. II, <i>Paris</i> , [1854 (1855)].
G.Z.	Germar Zeitschrift [Zeitschrift für die Entomol-
	giel, Vols. IV-V Leipzig, 1843-44.
	8.0], 1010. 11 . Dorposy, 1010 11.

I. B. E.			Illustrations of British Entomology, J. F. Stephens, London, 4 Vols., 1828-35.
I. F. I.			Indian Forest Insects, E. P. Stebbing, London, 1914.
I. M	•		Insecta Maderensia, T. V. Wollaston, London, 1854.
J. E. E.	•	•	Journal of Economic Entomology, Concord, N. H.
		•	
K.M.	•	•	Die Käfer von Mitteleuropa Ganglbauer, Vol. III, ii, Clavicornia, <i>Vienna</i> , 1899.
M. B. C. S	•	•	Monthly Bulletin, California State Commission Horticulture, Sacramento.
M. N.	•		Monograph of the family Nitidulariæ, A. Murray, in Transactions of the Linnean Society, London,
			Vol. XXIV, 211-414, London, 1864.
N. L. M.	1030	13	Notes from the Leyden Museum, Leyden.
N. J			Die Nitiduliden Japans, E. Reitter in Wiener
TOTAL STATE OF	PART .	202	Entomologische Zeitung, III & IV, Vienna, 1884
			& 1885.
N. R.			Répertoire des Coléoptères d'Europe décrits isole-
11. 10.	3 400	•	ment depuis 1864, Marseul, L'Abeille, Paris,
T TT			Vols. IX, XXII and XXIII.
P. L. W.	1	-	Proceedings of the Linnean Society of New South Wales.
R. I. M.			Records of the Indian Museum, Calcutta.
R. N.			Reise der österreischischen Fregatte Novara um
			die Erde, Zoologischer Theil, band II, Coleoptera, Redtenbacher, Vienna, 1867.
R. P. E. M			Report of the Proceedings of the 4th Entomological
		•	Meeting, Pusa, Calcutta, 1921.
S. C.	•		Skandinaviens Coleoptera Synoptiski bearbetade, 1862.
S. E			Systema Eleutheratorum, etc., J. C. Fabricius,
			2 Vols., Kiliæ, 1801.
S. N			Systema Naturæ, C. Linnaeus, 2 Vols., Holmiæ,
			1758-59.
S. E. N.		4	Syst. Eintheil. Nitidulidæ, Reitter, in Verhandlungen des Naturforschenden Vereins Zu Brünn,
TOTOT			XII, 1873.
T. E. S. L.		•	Transactions of the Entomological Society, London.
V. N. V. B.			Verhandlungen des Naturforschenden Vereins Zu Brünn.
W. E. Z.			Wiener Entomologische Zeit ng, Vienna.
Z. A. E.			Zeitschrift für Angewandte Entomologie, Berlin.
Z. M.			Zoologisches Magazin, Kiel.

Keys to genera will be found in references quoted under each subfamily and the species under each genus.

Habits and bionomics of the species occurring in India are given under biology under each species and under genera when they are represented by Indian species.

S. N. CHATTERJEE.

DERA DUN,

The 11th September 1924.

## Catalogue of Indian Insects.

#### PART 5.

#### NITIDULIDÆ.

Nitidulariæ propriæ Latreille (1807), Gen. Crust. Ins. II, 10-19 (pars.).

> Nitidulariæ Murray (1864), M. N. 211-414. Nitidulidæ Ganglb. (1899), K. M. 411 & 442-

565 [key to tribes]—Grouv. (1908), C. R. I. 329-397 [key to tribes]— Reitter (1911), F. G. K. 10-41 [key to tribes].

Biology: Erichson (1845), Naturg. Ins.
Deutschl. III, 124—Rupertsberger
(1880), Biol. Käf. Eur. 127-130—
Thomson (1862), S. C. IV. 137—Rey
[1886 (87)], Essai d'études sur certaines larves de Col. Ann. Soc. Linn.
Lyon, XXXIII, 173-174; sep. ed.
André, Beaune 43 & 44—Ganglb.
(1899), K. M. 445—Reitter (1911),
F. G. K. 10—Peyerimhoff (1921),
B. S. E. F., 284—Verhæff (1923), A. N.
2-109, pl. I-III & VII.

CATALOGUES: Schönherr (1808), Synon.

Ins. I, 2, 135-150—Gemminger &
Harold (1868), C. C. III, 802-838—
Grouv. (1913), Col. Cat. Junk.

Pars. 56.

#### I. CATERETINÆ.

Cateretes Erichson (1843), G. Z. IV, 226-227. Brachyptérides Lacord. [1854 (1855)], G. C. 290 & 291 [key to tribes and genera]. Brachypteridæ Murr. (1864), M. N. 230-231 [key to tribes and genera].

Cateretini Ganglb. (1899), K. M. 447 & 448 [key to genera]—Grouv. (1908), C. R. I. 325—Reitter (1911), F. G. K. 11-12 [key to genera].

Biology: Verheeff (1923), A. N. I. 8-11, 18-22, 66-72.

#### Heterhelus Jacq. du Val.

Jacq. du Val. (1858), (Subg. Cercus) Gen. Col. d'Eur. II 137—Murr. (1864), (Subg. Cercus) M. N. 23 & 239— Ganglb. (1899), K. M. 448 & 451. Amartus Reitt. (1875), Eur. Nitid. 2 (pars). Cateretes Heer (1841), F. H. I, 410 (pars).

kraatzi Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 108<sup>1</sup>.

#### II. MELIGETHINÆ.

Meligithina Thoms. (1859), S. C. I, 67— (1862), IV, 151—(1867), IX, 368. Meligethini Seidl (1872), En Balt, ed. I. 49—

Meligethini Seidl. (1872), Fn. Balt. ed. I, 49— Reitt (1911), F. G. K. 11 & 15 [key to genera].

#### 2. Pria Steph.

Steph. (1830), I. B. E. III. 30-49—Lacord. [1854 (1855)], G. C. 301 & 312—Ganglb. (1899), K. M. 464 & 535—Grouv. (1908), C. R. I. 340 & 367 [key to species].

Cormyphora Cast. (1840), Hist. Nat. Col. II, 12.

Laria Scop. (1763), Entom. Carn. 21 (pars).

apicalis Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 582<sup>1</sup>—(1908), C. R. I. 367. ceylonica Grouv. (1902), A. S. E. F. LXXI, Ceylon<sup>1</sup>

4811—(1908), C. R. I. 367.

diluticollis Grouv. (1913), R. I. M. VII, 2, North-East\_Assam<sup>1</sup>

indica Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 581<sup>1</sup>—(1908), C. R. I. 366 & 367<sup>2</sup>. Pegu<sup>2</sup> Sumatra<sup>2</sup>

Sumatra<sup>2</sup>

latipes Grouv. (1908), C. R. I. 366 & 367<sup>1</sup>, Nilgiris<sup>1</sup> t. 6. f. 7.

mirmidon Grouv. (1913), R. I. M. VIII, 2, Dibrugarh<sup>1</sup> 101.<sup>1</sup>

pallida F. (Nitidula) (1801), S. E. I, Ceylon<sup>1</sup> 349—Ol. (Nitidula) (1811), Encycl. méth. VIII, 216—Motsch. (1858), E. E. VII, 131—Reitt. (1873), S. E. N. 59 [note]—Grouv. (1908), C. R. I. 365<sup>1</sup> & 367 [footnote].

plagiata Grouv. A. S. E. B., XXXIII, 582<sup>1</sup> Kurseong<sup>1</sup> —(1908), C. R. I. 367.

#### 3. Meligethes Steph.

Steph. (1830), I. B. E. III, 30 & 45 (pars)— Lacord. [1854 (1855)], G.C. 301 & 313—Ganglb. (1899), K. M. 464, 492 & 535 [key to species]—Grouv. (1908), C. R. I. 340 & 367-377 [key to species].

Subgen. Acanthogethes Reitt. (1911), F. G. K. 16—Ganglb. (1899), K. M. 494.

Subgen. Odontogethes Reitt. (1911), F. G. K. 16—Ganglb. (1899), K. M. 494.

Biology.—Omerod (1874), E. M. M. 46-52—
Perris [1875 (1876)], A. S. L. L. 298, sep. ed. Deyrolle (1867), 40—Krassilstchik (1915), Report of Bio-Entom. Station Bessarabia, 1914, Kishinev, 49 [control]—Lind, Rostrup & Kφlpin Ravn (1915), Oversogt over Landbrugsplanternes Sygdomme i 1914, Beretning fra Statens Forsφgsvirksomhed i Plantekultur 31, Kφbenhavn [control]—Kemner (1918), Rapsbaggen Central—anstalten för Jordbruksförsök, 1917, Flygblad, 64, Entom-

Avdelningen, 17, 4, fig. 3 [control]— Hukkinen (1919). Om Rapsbaggen Och dess Avvarjände, Meddelanden till Landtmän No. 58 fran Agrikulture ekonomiska Försöksanstalten land, Entom. avdeln. 8 figs. 1-6 [bionomics and control - Voss (1919), Rapsglanzkäfer und Rapsverborgenrüssler, Schaffnits Flugblattsammüber Pflanzenschutz, Bonn-Poppelsdorf, Flugblatt 14, April 1919 [control]—Heikertinger (1920), Unterssuchungen über die standpflanzen der Blütenkäfergattungen, E. B. XVI, 4-9, 126-143 [bionomics]—Friederichs (1920), Untersuchungen über Rapsglanzkäfer in Mecklenburg, Z. A. E. VII, 1, 1-36, figs. 1-13, plates 1-2 [bionomics & control]—Burkhardt & Lengerken (1920), Z. A. E. VI, 270-295, figs. 1-32 [egg, larva, pupa]. Verhoeff (1923), A. N. 10, 63-64, 68-70, pl. III, figs. 31, 32, 36, 41 & 42.

**andrewesi** Grouv. (1908), C. R. I., 370<sup>1</sup> & 377 **arrowi** Grouv. *l. e.* 373<sup>1</sup> & 375 (*Acanthogethes*).

binotatus Grouv. (1894) A. S. E. B. XXXVIII, 460<sup>1</sup>—(1908) C. R. I. 375<sup>2</sup>.

bræti Grouv. l. c. 5831—l. c. 375.

cardoni Grouv. l. c. 5841—l. c. 376.

**castanescens** Grouv. (1903), A. S. E. F. LXII, 114<sup>1</sup>—(1908), C. R. I. 376 (Odontogethes).

**crassus** Grouv. (1908), C. R. I. 369<sup>1</sup> & 377. **cribrosus** Grouv. *l. c.* 368<sup>1</sup> & 375.

curvipes Grouv. l. c. 3731 & 374 (Acanthogethes).

ferrugineus Reitt. [1872 (1873)], V. N. V. B. 51, sep. 3 - Grouv. (1908) C. R. I. 376<sup>1</sup>.

Nilgiris<sup>1</sup> Nilgiris<sup>1</sup>

Chacuba<sup>1</sup>
Pegu<sup>2</sup>
Kurseong<sup>1</sup>
Barway<sup>1</sup>

Darjiling<sup>1</sup>

Nilgiris<sup>1</sup>
Bombay<sup>1</sup>
Nilgiris<sup>1</sup>
Madura<sup>1</sup>

Nilgiris<sup>1</sup> Sikkim<sup>1</sup> foedus Grouv. (1908), C. R. I. 370<sup>1</sup> & 377. Nilgiris<sup>1</sup>
luminosus Reitt. (1873), S. E. N. 72—Grouv. Ceylon<sup>1</sup>
l. c. 376.<sup>1</sup>
luteolus Reitt. l. c. 75—Grouv. l. c. 377.<sup>1</sup>
melleus Grouv. l. c. 371<sup>1</sup> & 376. Pegu<sup>1</sup>
mixtus Grouv. l. c. 368<sup>1</sup> & 375. Nilgiris<sup>1</sup>
Ppolitus Motsch. (1863), B. M. XXXVI, II Ceylon<sup>1</sup>
442—Reitt. (1873), S. E. N. 71.<sup>1</sup>
rubricollis Grouv. (1903), A. S. E. F. LXXII, Nilgiris<sup>1</sup>
125<sup>1</sup>—(1908), C. R. I. 375.
rufithorax Grouv. (1894), A. S. E. B. Belgaum

rufithorax Grouv. (1894), A. S. E. B. Belgaum<sup>1</sup> XXXVIII, 460<sup>1</sup>—(1908), C. R. I. 376.

waterhousei Grouv. (1908), C. R. I. 372<sup>1</sup> & Nilgiris<sup>1</sup> 375.

#### III. CARPOPHILINÆ.

Carpophilinæ Er. (1843), G. Z. IV, 226 & 233. Carpophilides Lacord. [1854 (1855)], 290 & 293.

Carpophilini Ganglb. (1899), 447 & 457— Grouv. (1908), C. R. I. 326—Reitt. (1911), F. G. K. 11 & 14.

Carpophilidæ Murr. (1864), M. N. 230 & 255— Reitt. (1873), S. E. N. 7.

#### 4. Brachypeplus Er.

Erichs. (1843), G. Z. IV 245—Lacord. [1854 (1855)], G. C. 293 & 297—Murr. (1864), M. N. 257 & 286-309 [key to species]—Grouv. (1908), C. R. I. 326-328 [key to species].

Nitidulopsis Wlk. (1858), A. M. N. H. (3) II, 206—Olliff (1885), P. L. W. X, 70.

Subgen. *Leiopeplus* Murr. (1864), M. N. 287 & 304.

Subgen. Liparopeplus Murr. l. c. 287 & 306.

Subgen. Onicotis Murr. l. c. 287 & 288.

Subgen. Selis Murr. l. c. 287 & 302. Subgen. Tasmus Murr. l. c. 287 & 290.

**aequalis** Walk. (*Nitidulopsis*), 1858, Ceylon<sup>1</sup>

A. M. N. H. (3) II, 206<sup>1</sup>—Olliff (1885),
P. L. W. X, 70—Grouv. (1908), C. R. I.

328.

birmanicus Grouv. (1892), A. M. G., XXXII, Burma<sup>1</sup> 834<sup>1</sup>.

**dubreuili** Grouv. (1908), C. R. I, 327 & Madura<sup>1</sup> 328<sup>1</sup>.

**feai** (fea) Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 835.<sup>1</sup>

latus Murr. (1864) M. N. 301<sup>1</sup> & 309.

Sarawak<sup>1</sup>
lowei Murr. l. c., 301<sup>1</sup> & 309.

notatus Murr. l. c., 300<sup>1</sup> & 309—Grouv. Ceylon<sup>1</sup>

(1908), C. R. I. 328.

obesus Grouv. (1895) B. S. E. F. CCLVIII.<sup>1</sup>

patruelis Murr. (1864), *l. c.*, 299<sup>1</sup> & 309.

Ceylon<sup>1</sup>

Singapore<sup>1</sup>

East Indies<sup>1</sup>
East Indies<sup>1</sup>

#### 5. Cilleus Laporte.

Laporte, (1835) E. E. 138—Erichs. (1843), G. Z. IV 247—Lacord. [1854 (1855)], G. C. 293 & 297—Murr. (1864), M. N. 311—Grouv. (1906), A. S. E. F. LXXV, 68—(1908), C. R. I. 327 & 329.

latus Grouv. (1908), C. R. I. 329<sup>1</sup>. Nilgiris<sup>1</sup> simoni Grouv. (1893), A. S. E. F. LXII, 383<sup>1</sup>. Ceylon<sup>1</sup>

#### 6. Platynema Rits.

Ritsema (1885), N. L. M. VII, 29—Grouv. (1908), C. R. I. 327. Orthogramma Murr. (1864), M. N. 318.

breviceps Murr., l. c., 323.1 ollifi Rits. (1885), N. L. M. VII, 291. Nicobars<sup>1</sup>
Andamans<sup>1</sup>

#### 7. Carpophilus Steph

\$teph. (1830), I. B. E. III, 50—Lacord. [1854 (1855)], G. C. 293 & 295—Murr. (1864), M. N. 341-398 [key to species]—Ganglb. (1899), K. M. 458—Grouv. (1908), C. R. I. 327 & 330-338 [key to species]—Blair (1922), E. M. M. LVIII, 3,65 [key to species].

Biology: Perris, (1853), A. S. E. F. (3) I, 593, sep. I (1863), 71, t. 18, figs. 69-76—Murtfeldt (1903), Ent. News, XIV, 293—Steb. (1914), I. F. I. 109—Dash. (1916), Rept. Dept. Agric. Barbados, 1914-15, 38-44—Rutgers (1918), Verslag Van den Directeur Van het Algemeen Proefstation der A. V. R. O. S., 1-VII-17—30-VI-18, 44—Zwaluwenburg (1918), Rept. Porto Rico Agric. Expt. Sta. 1917, 31-34—Roepke (1918), Entomologische onderzoekingen 1917-18, 13-14 [control]—Ghosh (1921), R. P. E. M. 108.

Subgen. *Tribrachys*, Lec. (1861), C. N. A. 83.

Subgen. *Ecnomorphus* Motsch. (1858), E. E. VII, 42—Murr. (1864), M. N. 385.

Subgen, *Eidocolastus* Murr. *l. c.* 399—Grouv. (1908), C. R. I. 327 (note).

Idocolastus Gemm. & Harold (1868), C. C. III, 814.

Subgen. *Endomerus* Murr., *l. c.*, 384. *Nitops* Murr. *l. c.* 382—Grouv. (1896),

A. S. E. F. LXV, 178.

Subgen. Heterodontus Murr. l. c. 342.

Subgen. Microxanthus Murr. l. c. 389.

Subgen. Myothorax Murr. l. c. 372.

Subgen. Stauroglossicus Murr. l. c. 398—Grouv. (1908), C. R. I. 327 [note].

Subgen. Urophorus Murr. l. c. 342.

bicolor Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 836<sup>1</sup> & 838—Grouv. (1897), l. c. XXXVIII, 351 (*Urophorus*).

bifenestratus Murr. (1864), M. N. 364<sup>1</sup> & Ceylon<sup>1</sup> 396—Grouv. (1908), C. R. I. 330<sup>2</sup> & Kurseong<sup>2</sup> 337. Mahe<sup>2</sup>

biguttatus Motsch. (1858), E. E. VII, 43— Murr. (1864), M. N. 387—Grouv. (1908), C. R. I. 333<sup>1</sup> & 338 (Ecnomorphus).

cribratus Murr. l. c. 3691 & 397.

**cylindricus** Murr. *l. c.* 382<sup>1</sup> & 397—Grouv. (1908), C. R. I. 337 (*Myothorax*).

dimidiatus F. (*Nitidula*) (1792), E. S. I, 1, 261—Murr. *l. c.* 379 & 397—Ganglb. (1899), K. M. 459 & 460—Grouv. (1908), C. R. I. 332 & 337.

BIOLOGY: Morrill (1913), J. E. E. VI, 2, 185-195—Wimhurst (1920), Ad. Rept.

Agric. Directorate [Mesopotamia], 1919, 39-41—Buxton (1920), B. E. R. 294—Essig (1921), M. B. C. S. X, 4, 140-143, 3 figs.

auropilosus Woll. (1854), I. M. 117. lewisi Reitt. (1884), N. J., 258 & 300— Grouv. [1912 (1913)], A. S. E. F. LXXXI, 388.

pusillus Steph. (1830), I. B. E., 51.
var. contigens Wlk. (Nitidula), (1858),
A. M. N. H. (3) II, 206—Olliff (1885),
P. L. W. X, 69—Grouv. (1908),
C. R. I. 332.

biguttatus Gemm. & Harold (1868), C. C. 810.

dilutus Murr. (1864), M. N. 373.

limbalis Murr. l. c. 373.

nigritus Murr. l. c. 373.

robustus Murr. l. c. 373.

testaceus Murr. l. c. 373.

vittiger Murr. l. c. 373—Grouv. (1908), C. R. I. 332. East Indies<sup>1</sup>

Ceylon<sup>1</sup>

India<sup>1</sup>

Cosmopolitan.

var. fumatus Boh. (1851), Ins. Caffr. I, 2,564—Murr. l. c. 375 & 397.

var. luridus Murr. l. c. 377 & 397.

var. mutilatus Er. (1843), G. Z. IV, 258— Murr. l. c. 378 & 397—Grouv. (1908), C. R. I. 322—Steb. (1914), I. F. I. 108.

hemipterus F. (Nitidula) (1792), E. S. I. 261.

bimaculatus Montr. (*Ips*) (1860), A. S. E. F. (3) VIII, 262.

puberulus Montr. (Ips) l. c. 263.

var. ochropterus Klug (1862), Peter's Reise, 209, t. 12, f. 9—Murr. (1864), M. N. 377 & 397—Fairm. (1869), A. S. E. F. (4) IX, 200—Grouv. (1908), C. R. I. 332.

tempestivus Jacq. du Val. (non Er.) (1856), Hist. Cuba, Ins. 42, ed. 8°, 1857, 96—Chevr. (1863), A. S. E. F. III, 602.

dubitabilis Grouv. (1897), A. M. G. Ceylon<sup>1</sup>
XXXVIII, 355<sup>1</sup>—Grouv. (1908), Burma<sup>2</sup>
C. R. I. 336<sup>2</sup> & 338 (Stauroglossicus).

erythrogonus Grouv. (1898), A. S. E. B. Bengal<sup>1</sup> XLII, 110<sup>1</sup>—(1908), C. R. I. 338.

familiaris Grouv. (1897), A. M. G. Tenasserim<sup>1</sup> XXXVIII, 353<sup>1</sup>.

feai (feae) Grouv. (1890), l. c. XXIX, 120— Burma (1892), XXXII, 338—(1897), XXXVIII, 351 (Urophorus).

flavipes Murr. (1864), M. N. 359<sup>1</sup> & 395— Celebes<sup>1</sup>
Grouv. (1908), C. R. I. 337—Steb. Singapore<sup>1</sup>
(1914), I. F. I., 109<sup>2</sup>, f. 72 [biol.] Siwaliks<sup>2</sup>

fulvipes Motsch. (1858), E. E. VII 42—Murr. Ceylon<sup>1</sup>
l. c. 352<sup>1</sup> & 395—Grouv. (1908),
C. R. I. 338.

var. fusculus Motsch. l. c. 421.

hebetatus Grouv. l. c. 334 & 338, t. 6, f. 1. Bengal<sup>1</sup> fulvipes Grouv. (1894), (non Motsch.), Belgaum<sup>1</sup>

A. S. E. B. XXXVIII, 578—(1908), NilgirisC. R. I. 3351.

hemipterus L. (Dermestes) (1758), S. N. X, Cosmopolitan. 358—(1767), XII, 1, 2, 565—Murr. (1864), M. N. 362 & 395—Ganglb. (1899), K. M. 439 & 460—Grouv. (1908), C. R. I. 337—Blatchley (1910), Cat. Col. Indiana, 631 & 632, fig. (Myothorax).

Biology: Perris [1875 (1876)], A. S. L. L. XXII, 303, f. 33 & 34, sep. ed. Deyrolle (1877), 45, f. 33 & 34—French (1911), Jl. Dept. Agr. Victoria, IX, 640—Steb. (1914), I. F. I. 108, f. 71— Essig (1915), J. E. E. VII, 396-400, 4 figs. [control]—Morrill (1917), 9th Ann. Rept. Arizona Commiss. Agric. & Hortic. 30-VI-17, 15-61—De Ong (1918), M. B. C. S. VII, 6, 429 [control]—Gurney (1918), Agric. Gaz., N. S. W., XXIX, 9, 641-650, 11 figs.—-Maskew (1919), M. B. C. S. VII, 6, 429-432—Morris (1920), Ann. Trop. Med. Parasit. XII, 4, 339-342—Essig (1920), M. B. C. S. IX, 3, 119-125, 5 figs. [control]—Maskew & Strong l. c. 12, 721-735—Poutiers (1921), Bull. Soc. Path. Vég. France, VIII, 1, 45-46—De Ong (1921), J. E. E. XIV, 5, 444-447 [control].

> bimaculatus L. (1767), S. N. ed. XII, 1, 2, 569—Ol. (*Nitidula*) (1790), Ent. II, 12, p. 4, t. 2, f. 11—Melsh. (*Cercus*) (1844), II, 105.

> brevipennis Germain (1835), Anales Unio. Chile, 397.

> cadaverinus F. (Nitidula) (1801), S. E. I. 354

dimidiatus Heer (Cateretes) (1841), F. H. I, 413.

ficus F. (Stenus) (1801), S. E. 603.

flexuosus Herbst. (Nitidula) (1790), Käf, V, 246, t. 54, f. 5.
pictus Heer (Cateretes) (1841), F. H. 413.
quadriguttatus Thunb. (Nitidula) (1794),
Ins. Suec. V. 70.
var. quadratus F. (Nitidula) (1798),
Suppl. E. S. 74.
var. quadrisignatus Er. (1843), G. Z. 257
—Murr. (1864), M. N. 363 & 396.

heros Grouv. (1892), A. M. G. XXXII, 836<sup>1</sup> Burma<sup>1</sup> & 838—(1897), l. c., XXXVIII, 351.

humeralis F. (Nitidula) (1798), E. S. Suppl.

74—Murr. (1864), 343 & 394—Grouv.
(1892), A. M. G. XXXII, 838—(1897),
XXXVIII, 351—(1908), C. R. I. 330
& 336 (Urophorus)—Muir (1918),
T. E. S. L. 224, pl. X, f. 7 [genitalia].
foveicollis Murr. l. c. 344 & 394—Grouv.
(1892) A. M. G. XXXII, 838—(1897),
XXXVIII, 351—(1908), C. R. I. 330—
Lefroy (1909), Ind. Ins. Life-297
[biol.]—Steb. (1914), I. F. I. 109
[biol.].

picinus Boh. (Brachypterus) (1851), Ins. Caffr. I. 2, 560—Murr. (1864), M. N. 343.

var. punctatus Fleut. (1887), A. S. E. F. (6), VII, 61—Grouv. [1912 (1913)], l. c., LXXXXI, 388.

lepidus Murr. (1864), M. N. 399<sup>1</sup> (Stauro-glossicus).

ligatus Murr. *l. c.* 363<sup>1</sup> & 396—Grouv. (1908), C. R. I. 337<sup>2</sup>.

marginellus Motsch. (1858), E. E. VII, 40— Murr. *l. c.* 347<sup>1</sup> & 394, t. 33, f. 1— Grouv. (1908), C. R. I. 330<sup>2</sup> & 336.

India.

Trop. Africa Madagascar Seychelles

East Indies<sup>1</sup>

Burma<sup>2</sup>
Sumatra<sup>2</sup>

Ceylon<sup>1</sup>

 $\frac{\text{Ceylon}^1}{\text{China}^1}$ 

Madagaskar<sup>2</sup> Southern Asia<sup>2</sup>

murrayi G	rouv. (18	392), A.	M. G.	XXXII,	Burma <sup>1</sup>
837-	<b>-(1908)</b> ,	C. R. I.	333 <sup>2</sup> &	338.	Nilgiris <sup>2</sup>
ohogua M	7777 /101	24) M	NT .	2611 &	East Indias

**obesus** Murr. (1864), 396.

oblongopunctatus Grouv. (1903), A. S. E. F. Darjiling<sup>1</sup> LXXII, 108<sup>1</sup>—(1908), C. R. I. 337.

obsoletus Er. (1843), G. Z. 259—Murr. Ceylon<sup>1</sup> (1864), M. N. 3681 & 396—Grouv. East Indies<sup>1</sup> (1908), C. R. I. 336—Steb. (1914), I. F. I. 109. Siam<sup>1</sup>

cribellatus Motsch. (1858), E. E. VII,

funerus Reitt. (non Murr.) (1884), N. J. 259—Grouv. [1912 (1913)], LXXXI,

var. strigipennis Motsch. l. c. 41-Murr. l. c. 368.

pilosellus Motsch. l. c. 41—Murr. l. c. 380<sup>1</sup> & 397—Grouv. (1908), C. R. I. 333 & 337 (Myothorax).

Cevlon<sup>1</sup> East Indies<sup>1</sup>

Japan<sup>1</sup> Tongking<sup>1</sup> Celebes<sup>1</sup>

Ceylon<sup>1</sup>

Belgaum<sup>2</sup>

plagiatipennis Motsch. (Colastus) (1858), E. E. VII, 39—Murr. l. c. 400<sup>1</sup>, t. 33, f. 6-Grouv. l. c. 3362 & 338 (Eidocolastus).

dilutus Motsch. (Colastus) l. c. 39-Murr. l. c. 400—Grouv. [1912 (1913)], A. S. E. F. LXXXI, 388.

bosschai (bosschae) (1892), N. L. M. XIV,

pubescens Murr. l. c. 3831 & 398 (Endome-Ceylon<sup>1</sup> rus).

sericeus Motsch. (1858), E. E. VII, 41-Murr. l. c. 3681 & 396—Grouv. (1908), C. R. I. 331<sup>2</sup> & 336.

signatus Grouv. (1908), C. R. I. 3331 & 337. var. ornatus Grouv. l. c. 3342.

East Indies<sup>1</sup> Kurseong<sup>2</sup>

Kurse ong1 Sikki m²

**tectus** Murr. (1864), 359¹ & 396—Grouv. *l. c.* Ceylon² 332² & 336.

Borneo<sup>1</sup> Singapore<sup>1</sup> Sarawak<sup>1</sup>

undulatus Grouv. l. c. 3311 & 336.

Siwaliks<sup>1</sup>

Java<sup>1</sup>

#### 8. Tetrisus Murr.

Murr. (1864), M. N. 404—Grouv. (1908), C. R. I. 327 & 338.

curvipes Grouv. l. c. 338<sup>1</sup>.

epuraeoides Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup>

839<sup>1</sup>.

hydroporoides Murr. (1864), M. N. 405<sup>1</sup>, East Indies<sup>1</sup> t. 35, f. 10.

#### IV. NITIDULINÆ.

Nitidulinæ Er. (1843), G. Z. IV, 226 & 266.

Nitidulides Lacord, [1854 (1855)], G. C., 290 & 300.

Nitidulites Jac. du Val. (1858), Gen. Col. d'Eur II, 140 & 157.

Nitidulina Thoms. (1859) S. C. I, 67—(1862), IV, 162—(1867), IX, 370.

Nitidulini Lec. (1861), C. N. A. 82 & 83— Ganglb. (1899), K. M. 447 & 462 [key to genera]—Grouv. (1908), C. R. I. 326 & 339 [key to genera]

Nitidulidæ Murr. (1864), M. N. 230. Nitiduli Mars. (1885), N. R. 19 & 20.

Nitiduliens Lameere (1900), Fn. Belg. 343 & 345.

#### 9. Ecnomaeus Er.

Er. (1843), G. Z, IV, 264—Lacord. [1854 (1855)], G. C. 293 & 299—Murr. (1864), M. N. 408—Grouv. (1908), C. R. I. 340 & 342.

haroldi Reitt. (1873), S. E. N. 1821—Steb. Himalaya<sup>1</sup> (1914) I. F. I. 110<sup>2</sup>. Siwaliks<sup>2</sup> waterhousei Grouv. (1908), C. R. I. 342<sup>1</sup>, North India<sup>1</sup> t. 6, f. 5—Steb. (1914), I. F. I. 110<sup>2</sup>. Siwaliks<sup>2</sup>

#### 10. Trimenus Murr.

Murr. (1864), M. N. 405—Grouv. (1908), C. R. I. 340 & 343.

**adpressus** Murr. *l. c.* 406<sup>1</sup>, t. 36, f. 4.

angustatus Murr. *l. c.* 407<sup>2</sup>—Grouv.

(1908), *l. c.* 343<sup>3</sup>.

East Indies<sup>2</sup> Ceylon<sup>3</sup> Nilgiris<sup>3</sup>

Malay Archipelago<sup>1</sup>

parallelopipedus Motsch.

(Epuræa) (1863), B. M. I, 438<sup>1</sup>—Reitt. (1873), S. E. N. 29—Grouv. (1908), C. R. I, 343<sup>1</sup>.

Ceylon

#### 11. Haptoneus Murr.

Murr. (1864), M. N. 401—Reitt. (1884), N. J. 258—Grouv. (1908), C. R. I. 340 & 343-346 [key to species].

Haptoneura Reitt. (1875), V. N. V. B. XIII, 61 & 64, sep. 11 & 14—(1884), N. J.

**concolor** Murr. (1864), M. N. 402<sup>1</sup>—Grouv. (1908), C. R. I. 346<sup>2</sup>.

epuraeoides Grouv. l. c. 344<sup>1</sup> & 346. luteolus (Epuræa) (1843), G. Z. 272— Chevr. (Epuræa), (1863), A. S. E. F. 4 (III), 602—Reitt. (Haptoncura) (1875), Nilgiris<sup>2</sup>

New Guinea<sup>1</sup>
Ceylon<sup>1</sup>
Ceylon <sup>3</sup>, <sup>4</sup>
Cuba<sup>1</sup>

V. N. V. B. XIII, 62, sep. 12—Grouv. Madagascar<sup>2</sup> (1906), A. S. E. F. LXXV, 75<sup>2</sup>— (1908), C. R. I. 346 [note].

floreolus Sharp (1890), B. C. A. II, 1, 305. intendens Walk. (Nitidula) (1858), A. M. N. H. (3) II, 206<sup>3</sup>—Olliff (1858), P. L. W. X. 70.

pauperculus Reitt. (1873), S. E. N. 179. pubescens Murr. (1864), M. N. 4034. subquadratus Reitt. (1877), Mittheil.

Münch. Ent. Ver. I, 22—Blackb. (*Haptoncura*) (1891), Trans. R. Soc. S. Austr. XIV, 105—Grouv. (1906), A. S. E. F. LXXV, 75<sup>2</sup>.

texanus Crotch (1874), Trans. Amer. Ent. Soc. III 76.

**motschulskyi** Reitt. (1873), S. E. N. 29—Grouv. (1908), C. R. I. 344.

augustulus Motsch. (*Epuræa*) (1863), B. M. I. 439<sup>1</sup>.

ocularis Fairm. (*Epuræa*) (1849), Rev. Zool. (2) I, 363, sep. Col. Polynesie, 28—Reitt. (1873), S. E. N. 27—(*Haptoncura*) (1875), V. N. V. B. 62, sep. 12—Grouv. (1908), C. R. I. 343<sup>1</sup>-345.

bifaciatus Kraatz. (Epuræa) (1895), D. E. Z. 148—Grouv. [1912 (1913)], A. S. E. F. LXXXI, 395<sup>1</sup>.

decoratus Reitt. (Epuræa) (1873), M S. E. N. 28 & 41—Grouv. (1906), A. S. E. F. LXXV, 75<sup>1</sup>.

significans Wlk. (Nitidula) (1858), Ceylon<sup>1</sup>
A. M. N. H. 3 (II), 206<sup>1</sup>—Olliff (1885),
P. L. W. X. 70.

tetragonus Murr. (1864), M. N. 401<sup>1</sup>, t. 33, Ceylon<sup>1</sup> f. 7—Reitt. (1884), N. J. 259.

thiemei Reitt. (Epuræa) (1873), S. E. N. Japan<sup>1</sup> 28 & 41--(1884), N. J. 260<sup>1</sup>.

pulsillus Grouv. (*Macroura*) (1894), A. S. Kurseong<sup>1</sup> E. B. XXXVIII, 585<sup>1</sup>—(1907), A. M. G. XLIII, 575—(1908), C. R. I. 344 & 345.

Ceylon<sup>1</sup>

Ceylon<sup>1</sup>
Calcutta<sup>1</sup>
Sikkim<sup>1</sup>

Japan<sup>1</sup> Tahiti<sup>1</sup> East A**f**rica<sup>1</sup>

Madagascar<sup>1</sup>

~ 1 1

reflexicollis Motsch. (Epuraa), (1863), Ceylon¹
B. M. II, 431¹—Reitt. (1873), S. E. N. Nilgiris³
27²—(1877), D. E. Z. XXI, 189—
Grouv. (1908), C. R. I. 344³ & 346. Japan²
testaceus Murr. (1864), M. N. 403¹— Ceylon²
Grouv. (1908), C. R. I. 346².
vulpecula Redt. (1867), R. N. 34— Macassar¹

#### 12. Propetus Reitt.

Reitt. (1875), V. N. V. B. XIII, 62 & 64, sep. 12 & 14—Grouv. (1908), C. R. I. 340 & 345.

Reitt. (1873), S. E. N. 27.

nigripennis Redtb. (Epuræa) (1867), R. N. 34<sup>1</sup>—Reitt. (1873), V. N. V. B. XIII 63, sep. 13. Ceylon<sup>1</sup>

#### 13. Amystrops Grouv.

Grouv. (1906), A. M. G. XLII, 312.

montana Grouv. (1913), R. I. M. VIII, 2, Assam<sup>1</sup> 103<sup>1</sup>.

#### 14. Omosita Er.

Er. (1843), G. Z. IV, 298—Lacord. [1854 (1855)], G. C. 301 & 309—Ganglb. (1899), K. M. 464 & 488—Grouv. (1908), C. R. I. 341 & 361—Verhoeff. (1923), A. N. 13, 78-80, pl. I, figs. 1-3 & 15.

ornata Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup>
112<sup>1</sup>.

#### 15. Epuraea Er.

Er. (1843), G. Z. IV, 267—Lacord. [1854 (1855)], G. C. 301 & 302—Ganglb.

(1899), K. M. 464 & 470—Grouv. (1908), C. R. I. 340 & 346-352 [key to species].

Biology: Perris (1862), A. S. E. F. 2 (IV), 184-189, pl. 5—Bagnall (1906), E. M. M. 42—(1906), Trans. Nat. Hist. Soc. Northumberland, 1, 416-420—Scott (1920), T. E. S. L. 99-127, figs. 1-8—Verhoeff (1923), A. N. 13, 72-78, pl. II, figs. 16-18 & 20-21; pl. VII, figs. 87-91.

Subgen. Dadopora Thoms. (1859), S. C. I, 68—(1862), IV, 168—(1867), IX, 378—Reitt. (1911), F. G. K. 29 & 30—Ganglb. (1899), K. M. 473.

Subgen. Epuræanella Crotch (1874), Trans. Amer. Ent. Soc. V, 76.

Omosiphora Reitt. (1875), V. N. V. B.XIII 56 & 63, sep. 6 & 13.

Subgen. *Micrurula* Reitt. (1884), W. E. Z. III, 209—Ganglb. (1899), K. M. 472.

Micruria Reitt. (1874), V. N. V. B. XIII, 56 & 64, sep. 8 & 14.

andrewesi Grouv. (1908), C. R. I. 350<sup>1</sup> & Nilgiris<sup>1</sup> 352.

apicalis Grouv. (1903), A. S. E. F. LXXII, Sikkim<sup>1</sup> 110<sup>1</sup>—(1908), C. R. I. 352.

**arcuata** Grouv. (1908) *l. c.* 350 & 352, t. 6, Nilgiris<sup>1</sup> f. 6.

birmanica Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 840<sup>1</sup>.

braeti Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 578<sup>1</sup>—(1908), C. R. I. 355 (*Micrurula*).

brunnea Wiedem (1823). Z. M. II, 721— India Grouv. (1908), C. R. I. 352 [note].

**cerina** Grouv. (1894), A. S. E. B. XXXVIII, Kurseong <sup>1</sup> 579<sup>1</sup>—(1908), *l. c.* 355 (*Micrurula*).

consobrina Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 840<sup>1</sup>.

convexa	Grouv.	(1908),	C.	$\mathbf{R}$ .	I.	$354^{1}$	& 355	Da	rjilin	g1
(M	Ii <mark>cruru</mark> la	·).								
0.00	~	4		-0.1	THE REAL PROPERTY.	700	Plant San Professor Trans Told	7000		

cribrata Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 111<sup>1</sup>—(1908), l. c. 351.

dubitabilis Grouv. (Haptoneura) (1890), Tenasserim<sup>1</sup> A. M. G. XXIX 121<sup>1</sup>.

emarginata Grouv. (1906), l. c. XLII, 316<sup>1</sup>. Burma<sup>1</sup>
 exculta Grouv. [1912 (1913)], A. S. E. F. Darjeeling<sup>1</sup>
 LXXXI, 394.

ornata Grouv. (non Reitt.) (1903), *l. c.* LXXII, 109<sup>1</sup>—(1908), C. R. I. 352.

fossicollis Grouv. l. c. 347<sup>1</sup> & 351. Assam<sup>1</sup> indica Grouv. (1894), A. S. E. B. XXXVIII, Belgaum<sup>1</sup>

4591—(1908), l. c. 346 & 351, t. 6, f. 9.

insolita Grouv. *l. c.* 353¹ & 355 (*Micrurula*).

latissima Reitt. (1880), N. L. M. II, 42¹—

Grouv. *l. c.* 351².

Ceylon²

omissa Grouv. *l. c.* 349 & 352<sup>1</sup>. Assam<sup>1</sup> persimilis Grouv. (1913), B. S. E. F. IV, Assam<sup>1</sup>

affinis Grouv. (non Steph.) (1908) C. R. I. 352<sup>1</sup> & 355 (Micrurula).

253.

propinqua Grouv. (1906), A. M. G. XLII, Burma<sup>1</sup> 365<sup>1</sup>.

pumila Grouv. (1897), l. c. XXXVIII, 3591— India<sup>1</sup> (1908), C. R. I. 351.

reticulata Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 841<sup>1</sup>.

submaculata Wlk. (Nitidula) (1859), Ceylon<sup>1</sup>
A. M. N. H. (3) III, 52<sup>1</sup>—Olliff (1885),
P. L. W. 70—Grouv. (1908), C. R. I.
352.

subochracea Grouv. (1903), A. S. E. F. Darjiling<sup>1</sup> LXXII, 111<sup>1</sup>—(1908), C. R. I. 352.

subtilis Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 579<sup>1</sup>—(1908), C. R. I. 355 (*Micrurula*).

waterhousei Grouv. l. c. 3481 & 352. N.-W. Himalayasi

#### 16. Stelidota Er.

Er. (1843, G. Z. 300—Lacord [1854 (1855)], G. C. 301 & 310—Ganglb. (1899), K. M. 463 & 466—Grouv. (1908),C. R. I. 339 & 361.

 multiguttata
 Reitt. (1877), D. E. Z. XXI,
 Japan¹

 110¹—(1884), N. J. 262¹—Grouv.
 ———

 (1908), C. R. I. 361².
 Ceylon²

 nigrovaria Fairm.
 Nilgiris²

 (Omosita) (1849), Rev. Mag. Zool. (2) I,
 Tahiti¹

 364, sep. Col. Polynésie, 28.
 ———

 multiguttata Grouv. (non Reitt.) (1892),
 Bengal¹

 A. S. E. B. XXXVI, 60¹—(1894),

#### 17. Ipidia Er.

Er. (1843), G. Z. IV, 289—Lacord. [1854 (1855)], G. C. 301 & 304—Ganglb. (1899), K. M. 463 & 465.

C. R. I. 361.

 xibirica
 Reitt. (Stelidota)
 (1879)
 D. E. Z.
 Japan

 XXIII, 216—(1884)
 N.J. 262—Mars.
 Siberia

 (Stelidota)
 (1885)
 N. R. 77.

 Burma.

#### 18. Prometopia Er.

Er. (1843), G. Z. IV, 279—Lacord. [1854] (1855)], G. C. 301 & 306—Murr. (1867), A. M. N. H. (3) XIX, 168, sep. Col. Old. Cal. 85—Grouv. (1908), C. R. I. 340 & 358-359 [key to species]. catilina Olliff (1883), T. E. S. L. 1771— Borneo<sup>1</sup> Grouv. (1897), A. M. G. XXXVIII, 366—(1908), C. R. I. 358<sup>2</sup> & 359 [note]. Kandhesh? gracilis Grouv. (1908), C. R. I. 3581& 359, Nilgiris<sup>1</sup> t. 6, f. 11. quadrimaculata Motsch (1863), B. M. East India<sup>1</sup> XXXVI, I, 4401—Grouv. (1897),Ceylon<sup>1</sup> A. M. G. XXXVIII, 366—(1908), Sikkim<sup>2</sup> C. R. I. 358<sup>2</sup> & 359—Arrow (1900), Monogr. Christm. Isl. 923. Cochin-China<sup>3</sup> setosula Grouv. (1894), A. S. E. B. Barway, Bengal<sup>t</sup> XXXVIII, 580<sup>1</sup>—(1908), C. R. I. 359.

#### 19. Parametopia Reitt.

Reitt. (1884), N. J. 259 & 262—(1885), 17—Grouv. (1908), C. R. I. 340 & 359-361 [key to species].

concolor Grouv. (1891), C. R. Soc. Ent. Kunbir, Bengal<sup>1</sup>
Belg. XXXV, CCXXXVII<sup>1</sup>—(1908),
C. R. I. 361.

indica Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 581<sup>1</sup>—(1908), C R. I. 361.

tripunctata Grouv. (1908), C. R. I. 360<sup>1</sup>. Nilgiris<sup>1</sup> var. trinotata Grouv. l. c. 360<sup>1</sup> & 361, Mahé<sup>1</sup> t. 6, f. 12.

#### 20. Axyra Er.

Er. (1843), G. Z. IV, 285—Lacord. [1854 (1855)], G. C. 301 & 305—Murra (1867), A. M. N. H. (3) XIX, 169, sep. Col. Old. Cal. 87—Grouv. (1908), C. R. I. 341 & 356.

Galaor Thoms. (1858), Arch. Ent. II, 43.
Subgen. Axyrodes Murr. (1867), A. M. N. H.
(3) XIX, 170, sep. Col. Old. Cal. 88.

feai (fex) Grouv. (1890), A. M. G. XXIX, Burma<sup>1</sup> 122<sup>1</sup>—(1908), C. R. I. 356 [note].

perplexa Reitt. (1873), S. E. N. 53<sup>1</sup>—Grouv. East India<sup>1</sup> (1908), C. R. I. 356-357 [add. descr.].

#### 21. Megauchenia M'Leay.

M'Leay (1825), A. J. 45, ed. Lequien (1833), 155—Arrow (1909), A. M. N. H. (8) IV, 191—Heller (1923), E. B. 19, 1-43 [key to species]. Ischan a Er. (1843), G. Z. IV, 287-Lacord. [1854 (1855)], G. C. 301 & 306—Reitt. (1873), S. E. N. 10 & 53-Grouv. (1908), C. R. I. 340 & 357-358 [key to species].

angustata Er. (Ischæna) (1843), G. Z. 2881 Grouv. (1890), A. M. G. XXIX, 124-(1908), C. R. I. 3582 (Ischæna). var. peninsularis Grouv. (1890), A. M. G. E. B. 19, 1, 41<sup>4</sup> (angustata).

Pegu<sup>2</sup> Burma<sup>3</sup> Tenasserim<sup>4</sup> XXIX, 123 & 1243—Heller (1923), Malay Archipelago<sup>2</sup>

feai Grouv. (fea) emend. (Ischana) (1892), A.M.G. XXXII, 8421—Heller (1923), E. B. 19, 1, 42.

indica Grouv. (*Ischæna*) (1908), C. R. I. 3571 t. 6, f. 5—Heller (1923), E. B. 19, 1. 42.

interstitialis Reitt. (Ischæna) (1880), A. M. G. XV, 456—Grouv. (Ischana) (1890), A. M. G. XXIX, 1231—Heller (1923), E. B. 19, 1, 41<sup>2</sup>.

Malacca<sup>1</sup> Tongking<sup>2</sup> Burma<sup>1</sup>

East Indies<sup>1</sup>

Nilgiris1

India1

New Guinea<sup>2</sup>

#### 22. Soronia Er.

Er. (1843), G. Z. IV, 277—Lacord. [1854] (1855)], G. C. 301 & 304—Ganglb. (1899), K. M. 464 & 468-Grouv. (1908), C. R. I. 340 & 356 [key to species - Verhoeff (1923), A. N. 13. 88-91, pl. II, figs. 25-26.

bræti Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 5801—(1908), C. R. I. 356. imperialis Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 1131—(1908), C. R. I. 356.

minima Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 113<sup>1</sup>—(1908), C, R, I, 356,

#### 23. Atarphia Reitt.

Reitt. (1884), N. J. 260 & 263—(1885), l. c. 39.

Pseudoplatychora Grouv. (1890), N. L. M. XII, 15 & 31.

convexiuscula Grouv. (Pseudoplatychora) East Indies<sup>1</sup> l. c. 15<sup>1</sup> & 31.

#### 24. Physoronia Reitt.

Reitt. (1884), N. J. 260 & 263-(1885), 18.

reitteri Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 843<sup>1</sup> (*Physorhina*).

#### 25. Amphicrossus Er.

Er. (1843), G. Z. IV, 346—Lacord. [1854 (1855)], G. C. 319 & 323—Grouv. (1908), C. R. I. 341 & 381-384 [key to species].

Lobostoma Fairm. (1892), Rev. d'Ent. XI 90— Grouv. (1908), B. S. E. F. 109.

Rhacostoma Berg. (1898), Com. Mus. Buenos Aires I, 18.

densatus Grouv. (1908), C. R. I. 3831 & 384. discolor Er. (1843), G. Z. IV, 348—Reitt. (1873), S. E. N. 99—Grouv. (1908), C. R. I. 3811 & 384.

muticus Grouv. (1908), C. R. I. 381<sup>1</sup> & 384. oblongus Grouv. (1897), A. M. G. XXXVIII, 368—(1908), C. R. I. 381<sup>1</sup> & 384.

(1892), A. S. E. B. XXXVI, 60—(1908), C. R. I. 381<sup>1</sup> & 384.

Assam<sup>1</sup>
Bengal<sup>1</sup>
Burma<sup>1</sup>

Annam<sup>1</sup>
East Indies<sup>1</sup>
Nilgiris<sup>1</sup>
Sumatra<sup>1</sup>

Pegu<sup>1</sup> Travancore<sup>1</sup> Bengal<sup>1</sup> Calcutta.<sup>1</sup> Pegu<sup>1</sup> pilosus Grouv. (1908), C. R. I. 382<sup>1</sup> & 384. Ceylon<sup>1</sup> plagiatus Grouv. (1890), A. M. G. XXIX, Burma<sup>1</sup> 125<sup>1</sup>.

#### 26. Aethina Er.

Er. (1843), G. Z. IV, 306—Lacord. [1854 (1855)], 301 & 302—Murr. (1857), A. M. N. H. (3), XIX, 176—(1868) sep. Ins. Old. Cal. 94—Grouv. (1908) C. R. I. 341 & 380 [key to species]. Subgen. Aethinopa Reitt. (1875), V. N. V. B. XIII, 109, sep. 13.

argus Grouv. (1890), A. M. G. XXIX, 125<sup>1</sup>. Burma<sup>1</sup>
 elongata Reitt. (1875), V. N. V. B. XIII, East Indies<sup>1</sup>
 109<sup>1</sup>, sep. 13.

nigrocastanea Grouv. (1903), A. S. E. F. Darjiling<sup>1</sup> LXXII, 115<sup>1</sup>—(1908), C. R. I. 380.

**obscura** Reitt. (1873), S. E. N. 86<sup>1</sup>—Grouv. Himalayas<sup>1</sup> (1908), C. R. I. 380.

puncticollis Grouv. (1897), A. M. G. Tenasserim<sup>1</sup> XXXVIII, 366<sup>1</sup>.

vicina Grouv. (1894), A. S. E. B. XXXVIII, Kurseong<sup>1</sup> 585<sup>1</sup>—(1908), C. R. I. 380.

#### 27. Aethinopsis Grouv.

Grouv. (1908), C. R. I. 341 & 379.

antennata Grouv. (1908), C. R. I., 3791. Sikkim1

#### 28. Macroura Reitt.

Reitt. (1873), S. E. N. 56 & 80—Groutv. (1907), A. M. G. XLIII, 552—(1908), C. R. I. 341 & 377-378 [key to species]. *Idæthina* Olliff (1884), N. L. M. VI. 73—

Grouv. (1908), A. M. G. XLIV, 78.

**cyaneipennis** Grouv. (*Aethina*) (1903), Darjiling¹ **※ A.** S. E. F. 116—(1907), A. M. G. Sikkim¹

XLIII, 572<sup>1</sup> & 574—(1908), C. R. I. 378<sup>1</sup>.

densita Reitt. (1875), V. N. V. B. 110<sup>1</sup>, sep. Ceylon<sup>1</sup> 14--Grouv. (1908), C. R. I. 378<sup>1</sup>.

longipennis Motsch. (*Carpophilus*) (1858), Ceylon<sup>1</sup> E. E. VII, 40<sup>1</sup>—Grouv. (1907), A. M. G. XLIII, 564 & 574.

meligethoides Reitt. (1873), S. E. N. 82<sup>1</sup>— Grouv. (1907), A. M. G. XLIII, 574— (1908), C. R. I. 378<sup>1</sup>.

nigritula Reitt. (1873), S. E. N. 82—Grouv. (1907), A. M. G. XLIII, 575—(1908), C. R. I. 378<sup>1</sup>.

Himalayas1

Australia<sup>1</sup>

India<sup>1</sup>

Malacca<sup>1</sup> Sumatra<sup>1</sup>

Java<sup>1</sup>

dubia Grouv. (1894), A. S. E. B. XXXVIII, 461—(1907), A. M. G. XLIII, 575.

orientalis Nietner (Meligethes) (1856), Ent.
Papers (Colombo), II, 11—(1857),
A. M. N. H. (2), XIX, 384—Grouv.
(1907), A. M. G. XLIII, 574—(1908),
C. R. I. 378.

nigritula Olliff (Idæthina) (non Reitt.), (1885), P. L. W. X. 70.

respondens Wlk. (*Meligethes*) (1859), Ceylon<sup>1</sup>
A. M. N. H. (3) III, 53<sup>1</sup>, Grouv. (1907), Bombay<sup>1</sup>
A. M. G. XLIII, 562<sup>1</sup>.

subrugosa Grouv. (1894), A. S. E. B. Belgaum<sup>1</sup> XXXVIII, 461<sup>1</sup>—(1907), A. M. G. XLIII, 575—(1908), C. R. I. 378.

#### 29. Pocadius Er.

Er. (1843), G. Z. IV, 318—Lacord. [1854 (1855)], 301 & 317—Ganglb. (1899), K. M. 464 & 540—Grouv. (1908), C. R. I. 341 & 380.

harmandi Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 114<sup>1</sup>.

**testaceus** Grouv. (1892), A. S. E. B. XXXVI, Bengal<sup>1</sup> 60<sup>1</sup>.

yunnanensis Grouv. (1910), N. L. M. Yunnan<sup>1</sup> XXXII, 251<sup>1</sup>.

#### 30. Pocadites Reitt.

Reitt. (1884), N. J. 264 & 267—(1885), 44—Grouv. (1908), C. R. I. 341 & 380.

dubitabilis Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 843<sup>1</sup>.
insularis Grouv. (1908), C. R. I. 380<sup>1</sup>. Andamans.<sup>1</sup>

#### 31. Cyllodes Er.

Er. (1843), G. Z. IV, 342—Lacord. [1854 (1855)], G. C. 319 & 320—Ganglb. (1899), K. M. 464 & 543—Grouv. (1908), C. R. I. 341 & 385-391 [key to species].

Pseudocamptodes Grouv. (1896), A. S. E. F. LXV, 76.

Strongylus Herbst. (1792), Käf. IV, 179 (pars)—Steph. (1830), I. B. E. III, 30 & 42 (pars)—Reitt. (1878), S. E. N. 98 & 128—Sharp. (1891), B. C. A. 355.

Volvoxis Kugel (1794), Schneid. Mag. I, 5, 355 (pars).

ænescens Grouv. (1892), A. M. G. XXXII, Burma¹ 847¹ & 848.

andamanensis Grouv. (1908), C. R. I., 387<sup>1</sup> Andamans<sup>1</sup> & 390.

Sikkim<sup>1</sup>

angustipes Grouv. l. c. 385-3861 & 390.

bifascies Wlk. (Tritoma) (1859), A. M. N. H.

(3) III, 2591—Olliff (Camptodes)

(1885), P. L. W. X, 71—Grouv. (1908),

C. R. I. 3851.

opponens Wlk. (Chilocorus) (1859), A. M. N. H. (3) IV, 219—Harold. (Camptodes) (1875), Col. Hefte XIV, 211.

ornatus Motsch. (Camptodes) (1863), B. M. II, 442—Reitt. (1884), N. J. 268—Grouv. (1908), C. R. I. 391.

East Indies

Cochin China

Ceylon<sup>1</sup>

Burma<sup>1</sup>

notatus Reitt. (Strongylus) (1873), 129-- Japan (1885), W. E. Z. IV, 174.

dubitabilis Grouv. (1913), Col. Cat. Junk, pars. 56, 163.

dubius Grouv. (non. Reitt.), (1892), Burma<sup>1</sup>
 A. M. G. XXXII, 846<sup>1</sup> & 849.

humeralis Grouv. l. c. 8471 & 849.

indicus Grouv. (1894), A. S. E. B. XXXVIII, Bengal<sup>1</sup> 462—(1908), C. R. I. 385<sup>1</sup> & 391. Kanara<sup>1</sup>

montanus Grouv. (*Pseudocamptodes*) Nilgiris¹ (1903), A. S. E. F. LXXII, 126— Kashmir¹ (1908), C. R. I. 385¹.

insularis Grouv. (1908), *l. c.* 388<sup>1</sup> & 391, Andamans<sup>1</sup> t. 7, f. 9.

limbatus Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 847<sup>1</sup> & 849.

marginatus Grouv. (1908), C. R. I. 386<sup>1</sup> & Cachar<sup>1</sup> 391.

nigropunctatus Grouv. (1892), A. M. G. Burma<sup>1</sup> XXXII, 846<sup>1</sup> & 849.

**quadrimaculatus** Grouv. (1908), C. R. I. Andamans<sup>1</sup> 388<sup>1</sup> & 391.

**quadrinotatus** Grouv. (1892), A. M. G. Burma<sup>1</sup> XXXII, 845<sup>1</sup> & 849.

**sexpunctatus** Grouv. (1908), C. R. I. 389<sup>1</sup> & Nilgiris<sup>1</sup>, 391.

undulatus Grouv. (1892), A. M. G. Burma<sup>1</sup> XXXII, 845<sup>1</sup> & 849.

Variegatus Grouv. (1892), A. M. G. East Indies<sup>1</sup> XXXVIII, 370<sup>1</sup>.

#### 32. Oxycnemus Er.

Er. (1843), G. Z. IV, 351—Lacord. [1854 (1855)], G. C. 319 & 324—Reitt. (1873),

S. E. N. 98 & 113—Sharp (1891), B. C. A. 362.

Eugoniopus Reitt. (1884), N. J. 264 & 267—(1885), l. c. 76—Sharp (1891), B. C. A. 364.

Psilopyga Lec. (1853), Proc. Acad. Philad.VI, 286—Lacord. [1854 (1855)], G. C.301 & 315.

reitteri Grouv. (Eugoniopus) (1892), Burma<sup>\*</sup> A. M. G. XXXII, 852.<sup>1</sup>

#### 33. Tricanus Er.

Er. (1843), G. Z. IV, 352—Lacord. [1854 (1855)], G. C. 319 & 325—Reitt. (1873), S. E. N. 98 & 138—Grouv. (1908), C. R. I. 341 & 392.

nigripennis Reitt. (1873), S. E. N. 139<sup>1</sup>— Ceylon<sup>1</sup> Grouv. (1892), A. M. G. XXXII, 854— (1908), C. R. I. 392<sup>1</sup>.

punctatissimus Grouv. (1892), A. M. G. Pegu<sup>1</sup> XXXII, 853<sup>1</sup>—(1908), C. R. I. 392<sup>2</sup>. Burma<sup>1</sup> Andamans<sup>2</sup>

striatopunctatus Grouv. (1892), A. M. G. Pegu<sup>1</sup>
XXXII, 853<sup>1</sup> & 854. Burma<sup>1</sup>

#### 34. Pallodes Er.

Er. (1843), IV, 348—Lacord. [1854 (1855)], G. C. 319 & 323—Reitt. (1873), S. E. N. 98 & 132—Sharp (1891), B. C. A. 364.

Neopallodes Reitt. (1884), N. J. 264 & 269— (1885), 78—Grouv. (1908), C. R. I. 341.

birmanicus Grouv. (1892), A. M. G. XXXII, Burma<sup>1</sup> 851<sup>1</sup>.

**cardoni** Grouv. (1894), A. S. E. B. XXXVIII, Bengal<sup>1</sup> 585—(Neopallodes) (1908), C. R. I. 392<sup>1</sup>.

dentatus Grouv. (Neopallodes) (1892), Burma<sup>1</sup> A. M. G. XXXII, 8491.

falsus Grouv. [1912 (1913)], A. S. E. F. Darjiling<sup>1</sup> LXXX, [1912 (1913)], 3981.

harmandi Grouv. (non. Grouv. 1902), (1903), A. S. E. F. LXXII, 117.— (1908), C. R. I. 392.

feai (feæ emend.) Grouv. (1892), A. M. G. Burma 1 XXXII, 851<sup>1</sup>.

vicinus Grouv. (Neopallodes), (1892), A.M.G. Burma<sup>1</sup> XXXII, 8501.

#### 35. Lasiodactylus Perty.

Perty (1830-1834), D. A. A. 34—Lacord. [1854 (1855)], 301 & 317—Grouv. (1908), C. R. I. 341 & 361-365 [key to species].

BIOLOGY: Ghosh (1921), R. P. E. M. 108 (Lordites).

Lordites Er. (1843), G. Z. IV, 316—Lacord. [1854 (1855)], 301 & 316—Murr. (1867), A. M. N. H. (3) XIX, 175, sep. Col. Old. Cal. (1878), 93.

ethinodes Reitt. (1873), S. E. N. 91<sup>1</sup>— India<sup>1</sup> Grouv. (1908), C. R. I. 364.

**chevrolati** Reitt. (1873), S. E. N. 901— Grouv. (1908), C. R. I. 3642—De Peyerimhoff (1916), R. I. M. XII, 3, Bengal<sup>2</sup> 109-1133, 3 figs. [descr. larva & biol.]. Coromandel3

monticola Grouv. (1910), N. L. M. XXXII,  $250^{1}$ .

pictus M'Leay (Nitidula) (1825), A. J. 40-- Malay Archipelago. Lequien (1833), A. J. 147—Arrow (1909), A. M. N. H. 8 (IV), 191.

costulatus Fairm. (Lordites) (1868), A. S. E. F. 4 (VIII), 775—Reitt. (1873), 88 —Grouv. (1908), C. R. I. 365.

glabricola Candèze (Lordites) (1861), Mém. Ceylon Liége XVI, 340—Reitt. (1873), S.E.N.

South Africa<sup>1</sup>

Yunnan<sup>1</sup>

East Indies

Bourbon Isd.

Madagascar

Bengal

88—(1884), N. J. 266—Grouv. (1908), Nilgiris C. R. I. 361 & 365. Andamans Pegu

testudinarius Reitt. (1873), S. E. N. 87— Madagascar Grouv. (1895), B. S. E. F. CCLVII— (1908), C. R. I. 365.

pubescens Grouv. (1908), C. R. I. 3621 & Murree Hills<sup>1</sup> 364 (Lordites).

quadrinotatus Grouv. (Lordites) (1908), A. S. E. F. LXVIII, 1431.

reitteri Grouv. (1908), C. R. I. 363 & 3641.

East Indies<sup>1</sup>

Bengal<sup>1</sup> Ceylon<sup>1</sup>

## 36. Circopes Reitt.

Reitt. (1873), S. E. N. 56 & 79—Grouv. (1908), C. R. I. 340 & 365 [key to species].

indicus Motsch. (Pocadius) (1858), E. E. Kurseong<sup>1</sup> VII, 43---Reitt. (1873), S. E. N. 79---Nilgiris<sup>1</sup> Grouv. (1908), C. R. I. 365<sup>1</sup>.

marginatus Grouv. (1894), A. S. E. B. Kurseong<sup>1</sup> XXXVIII, 5841—Grouv. (1908), C. R. I. 365.

subquadratus Motsch. (Pocadius) (1858), Cevlon<sup>1</sup> E. E. VII, 43—Reitt. (1873), S. E. N. Nilgiris<sup>1</sup> 79—Grouv. (1908), C. R. I. 3651.

#### 37. Xenostrongylus Woll.

Woll. (1854), I. M. 127—Ganglb. (1899), K. M. 464 & 536—Grouv. (1908), C. R. I. 341 & 378. Subg. Strongylolasius Reitt. (1911), F. G. K. 26 [note]. Subg. Oxystrongylus Reitt. l. c. [note].

dorsalis Grouv. (1908), C. R. I. 3781.

North Kanara<sup>1</sup>

38. Cametis Motsch.

Motsch. (1863), B. M. XXXVI, I, 2, 440—Grouv. (1908), C. R. I. 384.

picea Motsch. l. c. 441<sup>1</sup>—Grouv. l. c. 384<sup>1</sup>. Ceylon<sup>1</sup>

#### V. CRYPTARCHINÆ.

Ipinæ Er. (1843), G. Z. IV, 355 (—Rhizo-phagus).

Ipides Lacord. [1854 (1855)], G. C. 291 & 326. Ipites Jacq. du Val (1858), Gen. Col. d'Eur, 153 & 157.

Ipina Thoms. (1859), S. C. I, 66 & 69 (—Cyllodes, + Cryptarchina).

Ipideas Philippi. (1864), An. Univ. Chile, 454.

Ipini Lec. (1861), C. N. A. 82 & 84.Ipidæ Reitt. (1873), S. E. N. 7 & 139 (—Ipsomorpha).

*Ipsi* Mars. (1885) N. R. 20.

*Ipsinæ* Sharp (1891), B. C. A. 873.

Pityophagini Fauc. (1894), Gen. Col. 27.

Ipiens Lameere (1900), Fn. Belg. II, 342 & 354.

Cryptarchini Reitt. (1884), N. J. 257 & 269—Ganglb. (1899), K. M. 447 & 548 [key to genera]—Grouv. (1908), C. R. I. 326 & 395—Reitt. (1911), F. G. K. 11 & 36 [key to genera].

# 39. Cryptarcha Shuck.

Shuck (1839), E. B. E. 165—Lacord. [1854 (1855)], G. C. 326—Ganglb. (1899), K. M. 549—Grouv. (1908), C. R. I. 395-397 [key to species]—Reitt. (1911) F. G. K. 37.

\*Cryptarchus Heer (1841), F. H. I. 409.

\*Subg. Arhina Murr. (1867), A. M. N. H.

(3) XIX, 178—Col. Old. Cal. (1868),

96.

Subg. Cryptarchula Ganglb. (1899), K. M. 550.

andrewesi Grouv. (1908), C. R. I. 3961 & 397. Nilgiris<sup>1</sup> bicolor Grouv. (1892), A. M. G. XXXII,  $854 \& 856^{1}$ . Burma<sup>1</sup> dubia Grouv. (1890), A. M. G. XXIX, 126— Burma<sup>1</sup> (1892), l. c. XXXII, 856<sup>1</sup>. **feai** (*feæ* emend.) Grouv. (1892), A. M. G. Bengal<sup>1</sup> XXXII, 855 & 8561—Grouv. (1908), Pegu<sup>1</sup> C. R. I. 397<sup>1</sup>. flavipennis Reitt. (1873), S. E. N. 1201, East Indies<sup>1</sup> sep. 24—Grouv. (1908), C. R. I. 3972. Sikkim<sup>2</sup> flavoguttata Reitt. (1875), V. N. V. B. East Indies<sup>1</sup> XIII,  $120^{1}$ , sep. 24. fraterna Grouv. (1908), C. R. I. 3951 & Mahé<sup>1</sup> 397. lesnei Grouv. (1903), A. S. E. F. LXXII, Darjiling<sup>1</sup> 118<sup>1</sup>—(1908), C. R. I. 397. nigropunetata Grouv. (1892), A. M. G. Burma<sup>1</sup> XXXII, 854<sup>1</sup> & 856. octopunctata Grouv. (1897), A. M. G. Burma<sup>1</sup> XXXVIII, 3711. ocularis Reitt. (1875), V. N. V. B. XIII, East Indies<sup>1</sup> 121, sep. 25—Grouv. (1892), A. M. G. XXXII, 855<sup>1</sup> & 856. rajah Motsch. (1863), B. M. XXXVI, II, 443<sup>1</sup>—Grouv. (1908), C. R. I. 397 [note]. ritsemai Olliff (1884), N. L. M. VI, 2461. East Indies<sup>1</sup> rufomaculata Grouv. (1897), A. M. G.

#### 40. Glischrochilus Reitt.

Tenasserim<sup>1</sup>

Reitt. (subg. *Ips*) (1873), S. E. N. 162—Ganglb. (1899), K. M. 549 & 551.

BIOLOGY: Munro, 1917, Proc. R. Physical Soc., Edinburgh, XX, 3, 123-158, 5 pl. 28 figs.—Ritchie (1917), Trans.

XXXVIII, 3731.

R. Soc. Edinburgh, LII, part 1, No. 10, 213-234, plates—Blackman (1919),
Psyche, XXVI, 4, 85-96, 1 plate, 1 fig.
—Verhoeff (1923), A. N. 12, 80-88, pl. I, figs. 4-6, 13 & 14, pl. II, figs. 22-24; pl. VII, fig. 92.

*Ips* F. (1776), Gen. Ins. 23—Lacord. [1854 (1855)], G. C. 226 & 327 (pars).

Librodor Reitt. (1884), N. J. 269 & 270. Subg. Cryptarchips Reitt. (1911), F. G. K.

Subg. *Librodor* Ganglb. (1899), K. M. 553— Reitt. (1911), F. G. K. 37 & 38.

**egregius** Grouv. (*Librodor*) (1892), A. M. G.. Burma<sup>1</sup> XXXII, 856<sup>1</sup>.

japonius Motsch. (*Ips*) (1857), E. E. VI, 28— Burma<sup>1</sup> Grouv. (1892), A. M. G. XXXII, 856<sup>1</sup> (*Librodor*).

chinensis Reitt. (*Ips*) (1873), S. E. N. 160—(1879), Verh. Zool-bot. Ges. Wien. XXIX, 508.

#### VI. CYBOCEPHALINÆ.

Cybocephalites Jac. du Val. (1858), Gen. Col. d'Eur. II, 151 & 157.

Cybocephalini Horn (1879), Nitid. U. State, 268 & 319—GangIb. (1899), K. M. 447 & 545—Grouv. (1908), C. R. I. 326 & 392.

Cybocephalinæ Sharp (1891), B. C. A. 372— Reitter (1911), F. G. K. 10.

## 41. Cybocephalus Er.

Er. (1844), G. Z. V. 441—Lacord. [1854 (1855)], G. C. 319 & 322—Gangb. (1899), K. M. 546—Grouv. (1908), C. R. I. 392-395 [key to species].

BIOLOGY: Rutherford (1914), Trop. Agric. XLIII, 4, 319-323—Malenotti (1917), Redia, XIII, 1, 17-53, 2 pl.—Herbert (1920), U. S. Dept. Agric. Bull. 838, 22, 6 pl. 5 figs.

Acribis Waterh. (1877), Proc. Zool. Soc. Lond. 78—Champ. (1913), T. E. S. L. 71.

Phantazomerus Jac. du Val. (1854), B. S. E. F. 307.

Stagnomorpha Woll. (1854), I. M. 482.

æneonitens Champ. (1923), E. M. M. West Almora<sup>1</sup> LIX, 77-781.

binotatus Grouv. (1908), C. R. I. 3941 & 395—Champ. (1923), E. M. M. LIX, 78<sup>2</sup> [addl. descr.].

chlorocephalus Er. (1844), G. Z. V. 442— Motsch. (1863), B. M. XXXVI, II, 479—Reitt. (1874), V. N. V. B. XII, 6—Grouv. (1908), C. R. I. 3951— Champ. (1923), E. M. M. LIX, 772— [addl. descr.].

flavipes Motsch. (1863), B. M. XXXVI, II, 4781—Reitt. (1874), V. N. V. B. XII, 7—Grouv. (1908), C. R. I. 3921 & 395.

major Motsch. (1863), B. M. XXXVI, II, 4781—Reitt. (1874), V. N. V. B. XII, 12-Grouv. (1908), C. R. I. 3951.

nigripennis Motsch. (1863), B. M. XXXVI, II, 4791—Reitt. (1874), V. N. V. B. 12.

puncticeps Grouv. (1908), C. R. I. 3931 & 395.

smaragdicollis Motsch. (1866), B. M. XXXIX, I, 398—Reitt. (1874), V. N. V. B. XII, 6—Grouv. (1908), A. S. E. F. LXXVII, 395.

splendens Grouv. (1908), A. S. E. F. LXXVII, 3921 & 394.

West Almora<sup>2</sup>

India<sup>1</sup> Ceylon<sup>1</sup> Nilgiris1 Haldwani<sup>2</sup> West Almora<sup>2</sup>

Singapore<sup>2</sup> India<sup>1</sup> Ceylon<sup>1</sup>

Cevlon<sup>1</sup> Bombay<sup>1</sup>

Ceylon<sup>1</sup>

Kanara<sup>1</sup> Nilgiris<sup>1</sup> Ceylon.

Nilgiris<sup>1</sup>

subquadratus Motsch. (1863), B. M. XXXVI,

II, 479<sup>1</sup>—Reitt. (1874) V. N. V. B. Ceylon<sup>1</sup>
XII, 7<sup>1</sup>. India<sup>1</sup>
subrotundatus Motsch. *l. c.*—479<sup>1</sup>. India<sup>1</sup>

Total 228 species.

### ADDENDA.

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humeralis Grouv. (1890), A. M, G.

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A. S. E. F. 389

Grouv. [1912 (1913)],

Burma<sup>1</sup>

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adpressus, Trimenus aeneonitens, Cybocephalus aenescens, Cyllodes aequalis, Brachypeplus aethinodes, Lasiodactylus affinis, Epuraea persimilis andamanensis, Cyllodes andrewesi, Cryptarcha andrewesei, Epuraea andrewesi, Meligethes angustata, Megauchenia angustatus, Trimenus adpressus angustulus, Haptoneus motschulskyi angustipes, Cyllodes antennata, Aethinopsis apicalis, Epuraea apicalis, Pria arcuata, Epuraea argus, Aethina arrowi, Meligethes auropilosus, Carpophilus dimidiatus

bicolor, Carpophilus bicolor, Cryptarcha bifasciatus, Haptoneus ocularis bifascies, Cyllodes bifenestratus, Carpophilus biguttatus, Carpophilus biguttatus, Carpophilus dimidiatus bimaculatus, Carpophilus dimidiatus bimaculatus, Carpophilus hemipterus binotatus, Cybocephalus binotatus Meligethes birmanica, Epuraea birmanicus, Brachypeplus birmanicus, Pallodes bosschai, Carpophilus plagiatipennis braeti, Epuraea braeti, Meligetha

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davidis, Glischrochilus japonius decoratus, Haptoneus oculari densatus, Amphicrossus

densita, Macroura dentatus, Pallodes diluticollias, Pria dilutus, Carpophlus plagiatipennis dilutus, Carpophl us dimidiatus dimidiatus, Carpophilus dimidiatus, Carpophilus hemipterus discolor, Amphicrossus dorsalis, Xenostrongylus dubia, Cryptarcha dubia, Macroura nigritula dubitabilis, Carpophilus dubitabilis, Cyllodes dubitablis, Epuraea dubitabilis, Pocadites dubius, Cyllodes dubitabilis dubreuili, Brachypeplus

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fulvipes Carpophilus hebeatus
fumatus, Carpophilus dimidiatus
funereus, Carpophilus
funereus, Carpophilus obsoletus
fusculus Carpophilus fulvipes

egregius, Glischrochilus elongata, Axyra emarginata, Epuraea epuraeoides, Haptoneus epuraeoides, Tetrisus erythrogonus, Carpophilus exculta, Epuraea glabricola, Lasiodaetylus pietus graeilis, Prometopia

falsus, Pallodes familiaris, Carpophilus feai, Axyra feai, Brachypeplus feai, Carpophilus feai, Cryptarcha feai, Megauchenia feai, Pallodes ferrugineus, Meligethes ficus, Carpophilus hemipterus flavipennis, Cryptarcha flavipes, Carpophilus flavipes, Cybocephalus Aavoguttata, Cryptarcha flexuosus, Carpophilus hemipterus Horeolus, Haptoneus luteolus foedus, Meligethes fossicollis, Epuraea foveicollis, Carpophilus humeralis fraterna, Cryptarcha

harmandi, Pocadius
harmandi, Pallodes falsus
haroldi, Ecnomaeus
hebetatus, Carpophilus
hemipterus, Carpophilus
hemipterus, Carpophilus dimidiatus
heros, Carpophilus
humeralis, Carpophilus
humeralis, Cyllodes
hydroporoides, Tetrisus

imperialis, Soronia indica, Epuraea indica, Megauchenia indica, Parametopia indica, Pria indicus, Circopes indicus, Cyllodes insolita, Epuraea insularis, Cyllodes insularis, Pocadites intendens, Haptoncus luteolus interstitialis, Megauchenia

japonius, Glischrochilus

kraatzi, Heterhelus

latipes, Pria latissima, Epuraea latus, Brachypeplus latus, Cillaeus lepidus, Carpophilus lesnei, Cryptarcha lewisi, Carpophilus dimidiatus ligatus, Carpophilus limbalis, Carpophilus dimidiatus limbatus, Cyllodes longipennis, Macroura lowei, Brachypeplus luminosus, Meligethes luridus, Carpophilus dimidiatus luteolus, Haptoneus luteolus, Meligethes

major, Cybocephalus marginatus, Circopes marginatus, Cyllodes marginellus, Carpophilus meligethoides, Macroura melleus, Meligethes minima, Soronia mirmidon, Pria mixtus, Meligethes montana, Amystrops montanus, Cyllodes indicus monticola, Lasiodactylus motschulskyi, Haptoneus multiguttata, Stelidota multiguttata, Stelidota nigrovaria murrayi, Carpophilus muticus, Amphicrossus mutilatus, Carpophilus dimidiatus

nankineus, Glischroichilus japonius nigripennis, Cybocephalus nigripennis, Propetes nigripennis, Tricanus nigritula, Macroura nigritula, Macroura orientalis nigritus, Carpophilus dimidiatus nigrocastanea, Aethina nigropunctata, Cryptarcha nigropunctatus, Cyllodes nigrovaria, Stelidota notatus, Brachypeplus notatus, Cyllodes bifascies

obesus, Brachypeplus obesus, Carpophilus oblongopunctatus, Carpophilus oblongus, Amphicrossus obscura, Aethina obsoletus, Carpophilus ochropterus, Carpophilus dimidiatus octopunctata, Cryptarcha ocularis, Cryptarcha ocularis, Haptoneus olliffi, Platynema omissa, Epuraea opacus, Amphierossus opponens, Cyllodes bifascies orientalis, Macroura ornata, Omosita ornata, Epuraea exculta ornatus, Carpophilus signatus ornatus, Cyllodes bifascies

pallida, Pria parallelopipedus, Trimenus patruelis, Brachypeplus pauperculus, Haptoneus luteolus peninsularis, Megauchenia angustata perplexa, Axyra persimilis, Epuraea picea, Cametis picinus, Carpophilus humeralis pictus, Lasiodactylus pictus, Carpophilus hemipterus pilosellus, Carpophilus pilosus, Amphicrossus plagiata, Pria plagiatipennis, Carpophilus plagiatus, Amphicrossus ? politus, Meligethes propinqua, Epuraea puberulus, Carpophilus dimidiatus pubescens, Carpophilus

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strigipennis, Carpophilus obsoletus submaculata, Epuraea subcohracea, Epuraea subquadratus, Circopes subquadratus, Cybocephalus subquadratus, Haptoncus luteolus subrotundatus, Cybocephalus subrotundatus, Cybocephalus subrugosa, Macroura subtilis, Epuraea

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rajah, Cryptarcha
reflexicollis, Haptoncus
reitteri, Lasi odactylus
reitteri, Oxycnemus
reitteri, Physoronia
respondens, Macroura orientalis
reticulata, Epuraea
ritsemai, Cryptarcha
robustus, Carpophilus dimidiatus
rubricollis, Meligethes
rufithorax, Meligethes
rufomaculata, Cryptarcha

undulatus, Carpophilus undulatus, Cyllodes

variegatus, Cyllodes

vicina, Aethina

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sericeus, Carpophilus
setosula, Pometopia
sexpunctatus, Cyllodes
sibirica, Ipidia
signatus, Carpophilus
significans, Haptoneus ocularis
simoni, Cillaeus
smaragdicollis, Cybocephalus
splendens, Cybocephalus
striatopunctatus, Tricanus

waterhousei, Ecnomaeus waterhousei, Epuraea waterhousei, Meligethes

yunnanensis, Pocadius



